



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,677	03/18/2004	Timothy G. Offerle	81095828FGT1910	2676

28549 7590 01/13/2005

KEVIN G. MIERZWA
ARTZ & ARTZ, P.C.
28333 TELEGRAPH ROAD, SUITE 250
SOUTHFIELD, MI 48034

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT PAPER NUMBER

3683

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/708,677

Applicant(s)

OFFERLE ET AL.

Examiner

Christopher P. Schwartz

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/25/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-52)
- 6) ☐ Other: _____

Christopher P. Schwartz
CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER

DETAILED ACTION

Specification

1. Applicants submitted a clean version and a marked up version of a substitute specification. However the clean version does not reflect the changes (i.e. serial numbers of the files listed) made to the marked up version. It is unclear which specification applicant's intend to enter.

Claim Objections

2. Applicant's submitted two sets of claims with their response. One set includes 26 claims which have limitations that differ from a second set submitted – claims 1-30. The examiner will examine the changes made to claims 1-30 as these appear to be representative of the claims that were originally filed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 3683

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4,11-27,29,30 rejected under 35 U.S.C. 103(a) as being unpatentable over Deng et al. or Gerum et al. in view of Mizusawa et al..

Regarding claims 1, Deng et al. '094 or Gerum et al. '683 each show a trailer system that "senses" a current position (or hitch angle) of a trailer relative to a vehicle and determines and uses a steering wheel angle to determine a predicted position of the trailer based on the current position thereof and the steering wheel angle. See columns 2 and 3 of Deng et al. and Gerum et al. claims 1-7.

Lacking in these references is the camera and display.

Mizusawa et al. Teaches this idea as discussed in column 1 and as clearly seen from figure 1.

The ordinary skilled worker in the art at the time of the invention would have found it obvious to have modified either Gerum et al. or Deng et al. with a camera and display system, as taught by Mizusawa et al. simply to assist the driver when towing a trailer.

The limitations of claims 2-4, as broadly claimed, are fairly suggested by the combined references above.

Regarding claims 11 and 12 these limitations would have been obvious to the ordinary skilled worker in the art to prevent the vehicle and trailer from jack-knifing upon putting the towing vehicle in "reverse". The signal generated could come from the reverse brake lights.

Art Unit: 3683

Regarding claims 13-17 these limitations are fairly taught by the references above.

Regarding claim 18 when the transmission is put into reverse (either by shift lever or push button (which may be on the shift lever – as all are notoriously well known in the art) a reverse signal is generated. The “transmission controller” could be the shift lever.

Regarding claim 19 this limitation is simply an obvious variation of generating a reverse signal to the reverse brake lights—an indicator indicating the transmission shift lever has been put into reverse.

Regarding claim 20 these limitations are met.

Regarding claim 21, as broadly claimed, these limitations are met with either ‘683 or ‘094 as modified by Mizusawa et al.. Note the hitch angle sensors and controllers which are used in both references and the camera and display system of Mizusawa et al. to aid the driver. Just about any display of the trailer from the camera may be interpreted as a “predicted path”, as broadly claimed, as interpreted by the driver.

Regarding claims 22-27,29 as broadly claimed and as explained above, these limitations are fairly taught by the combined references above.

Regarding claim 30, as best understood, these requirements are met.

6. Claims 5-10,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Gerum et al. ‘683 or Deng et al. ‘094 in view of Mizusawa et al as applied to claim1 above, and further in view of Hrazdera et al.

Art Unit: 3683

Regarding claims 5-10 although '683 or '094 lack a brake-steer system such systems are notoriously well known in the art used to reduce the turning radius of the vehicle.

See column 4 lines 14 and 29-30 of Hrazdera et al..

One having ordinary skill in the art at the time of the invention would have found it obvious to have supplied either '094 or '683 with a brake-steer system, as taught by Hrazdera et al. to reduce the turning radius of the vehicle/trailer combination to improve maneuverability or to adapt the device to agricultural type vehicles.

Given a different interpretation, claim 18 could be rejected here as well, since Hrazdera et al. teaches this idea at 6 and 2, and to have modified either '683 or '094 with such a device would have been obvious simply dependent upon the type of vehicle or the environment the vehicle is to be utilized in.

7. Claim 28 rejected under 35 U.S.C. 103(a) as being unpatentable over '094 or '683 as applied to claim 21 above, and further in view of Yoshioka et al.

'094 or '683 lack using an ultrasonic sensor for the detection of a distance to an object.

Yoshioka et al. Teaches this at 27. Note the other devices taught in Yoshioka et al. to assist driver navigation.

One having ordinary skill in the art at the time of the invention would have found it obvious to have modified either '094 or '683 with an ultrasonic sensor to aid in object detection and assist the driver in avoiding a collision with such when backing up the trailer.

Response to Arguments

8. Applicant's arguments filed 10/25/04 have been fully considered but they are not persuasive. The references clearly teach the claimed limitations as outlined in the action above. The action is therefore made Final.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

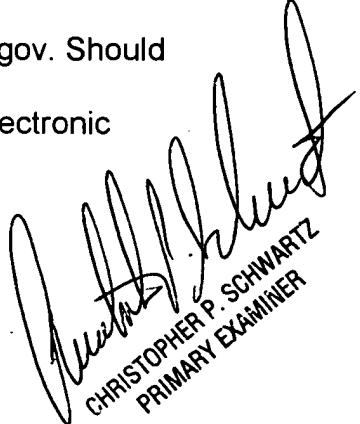
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps
1/8/05



CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER